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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/620,354 | 07/17/2003 | Isamu Ohshita | 107156-00193 | 8911 |

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| EXAMINER |
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PERRY, ANTHONY T

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| ART UNIT | PAPER NUMBER |
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2879

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 01/05/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/620,354

Applicant(s)

OHSHITA ET AL.

Examiner

Anthony T. Perry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-8 and 10-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-8 and 10-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The Amendment filed on 10/10/2006, has been entered and acknowledged by the Examiner.

Cancellation of claims 1-3 has been entered.

New claim 16 has been added.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-8 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogura et al. (US 2002/0070663 A1) in view of Kobayashi et al. (US 6,628,067), and further in view of Matthies (US 6,498,592).

Regarding claims 4 and 13-16, Ogura et al. teach an organic electroluminescent display device comprising a plurality of pixels located above a substrate (1001), wherein each pixel is formed by two light emitting elements producing only two different colors of predetermined chromaticity values (Figure 6 shows three different colors per pixel, but paragraph 0168 states that two colors instead of three colors may be used), wherein each light-emitting element is formed by interposing a luminescent layer (1004) containing organic electroluminescent materials between a pair of electrodes (1002, 1006), and at least one of the pair of electrodes comprises a plurality of independent array patterns to the light-emitting elements (see for example, Fig. 6 and paragraphs 0166-0168). Ogura teaches the different colors being, for

example, blue and yellow (paragraph 0168). It is noted that Ogura does not specifically state that the two different colors are mixed to produce a white color.

However, Kobayashi teaches blue and yellow organic light emitting elements having different emissive areas and used in combination to form an organic EL white light source that has CIE coordinates of (0.33, 0.35) (see for example col. 9, line 62 – col. 10, line 59). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the two light-emitting elements emitting blue and yellow light, having different emissive areas so that they can operated at the same time to produce a white light source having an excellent CIE value. The mixture of blue and yellow light will inherently produce a white color falling within a line segment between the blue and yellow colors in a CIE_{xy} chromaticity diagram. The recitation “by controlling each gradation of the two light-emitting elements” has not been given patentable weight because is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987). Furthermore, the necessary step of choosing a blue color and yellow color for the display meets the recitation of “controlling a gradation of the two light-emitting elements,” since choosing a certain type of organic EL material for the two different colors in effect translates to controlling the gradation of the two elements.

Ogura et al. and Kobayashi do not specifically teach the different colors being driven by a different current or different voltages. However, Matthies teaches an organic electroluminescent display device comprising a plurality of light emitting elements formed of different color light-emitting films driven by different currents and voltages from each other. Matthies teaches a color correction circuitry adapted to individually control the current passing through each region

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to correct for any differential aging of regions (col. 11, lines 1-40). The least efficient region is provided with the largest current since current is directly proportional to the intensity of the light emitted. Accordingly, it would have been obvious at the time the invention was made to include a color correction circuitry so that individual regions can be calibrated to display brightness levels which are consistent across the entire dynamic range of the display.

Regarding claim 6, Ogura teaches doping (coupling with a foreign material) the light emitting layers (for example, see paragraph 0073).

Regarding claim 7, the functional language, "said chromaticity values of two colors are controlled by changing thickness of said light emitting film" has not been given patentable weight because it is narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 U.S.C. § 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. *In re Fuller*, 1929 C.D. 172: 388 O.G. 279.

Claim 8 is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113). Therefore, it is the position of the examiner that it would have been obvious to one of ordinary skill in the art that the OLED disclosed by Ogura et al. is at least a fully functional equivalent to the Applicant's claimed OLED as evidenced by Ogura's suggestion of all of the Applicant's claimed structural limitations.

Claim 12 is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior

art by a process limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113). Therefore, it is the position of the examiner that it would have been obvious to one of ordinary skill in the art that the OLED disclosed by Ogura et al. is at least a fully functional equivalent to the Applicant's claimed OLED as evidenced by Ogura's suggestion of all of the Applicant's claimed structural limitations. Furthermore, Ogura et al. teach the EL layer being formed by a printing method (for example, see paragraph 0054).

Regarding claim 5, Ogura teaches that organic electroluminescent layers emitting colors other than red, green, and blue may be used in the EL device. Ogura does not specifically recite white as one of the colors used in the device. However, the existence of white color organic electroluminescent materials and their use is well known in the art. It is noted that the applicant's specific use of the color white as one of the two different colors, does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. It is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select any two colors based on the desired colors of the display.

Regarding claims 10-11, Ogura, Kobayashi, and Matthies teach the use of different colored organic EL layers and do not specifically teach the use of a single color EL layer with the use of a color filter or color conversion filter. However, three main groups of EL devices used as color displays, including the use of separate colored EL layers, the use of a single white EL layer used with color filters, and the use of a single blue EL layer with color conversion filters (CCM) are well known in the art. It is noted that the applicant's specific use of color filters or color conversion filters for producing the two different colors in the light-emitting elements, does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. It is considered to be a matter of choice, which a

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person of ordinary skill in the art would have found obvious to use any type of configuration (different EL layers, white EL layer with color filters, or blue EL layer with color conversion filters) for producing the two differently colored light-emitting elements, since the selection of any of these art recognized equivalents would be within the level of ordinary skill in the art.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Koyama (US 6,617,799) provides evidence that EL devices that use different color EL layers, a single color EL layer with color filters, and a single color EL layer with color conversion filters are known equivalents.

Response to Arguments

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is **(571) 272-2459**. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. **The fax phone number for this Group is (571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Anthony Perry
Patent Examiner
Art Unit 2879
December 26, 2006


Ashok PATEL
PRIMARY EXAMINER